Numb. CLVII.

The GUARDIAN.

Go to the Ant thou Sluggard; consider her Ways, and be wise.
SOLOMON.

Thursday, September 10. 1713.

IT has been observed by Writers of Morality, that in order to quicken Human Industry, Providence has so contrived it, that our daily Food is not to be procured without much Pains and Labour. Thus those of Birds and Beasts, the several Arts of Tilling, with all the different kinds of Agriculture, are but daily Scenes of Business, and give Employment to the greatest part of Mankind. If we look into the Brute Creation, we find all its Individuals engaged in a painful and laborious way of Life, to procure a necessary Sustenance for themselves, or those that grow up under them. The Preservation of their Being is the whole Business of it. An Idle Man is therefore a kind of Monster in the Creation. All Nature is busie about him; every Animal he sees reproaches him. Let such a Man, who lies as a Burthen or dead Weight upon the Species, and contributes nothing either to the Wealth of the Commonwealth, or to the Maintenance of himself and Family, consider that Instinct with which Providence has endowed the Ant, and by which is exhibited an Example of Industry to rational Creatures. This is set forth under many surprising Instances in the Paper of Yesterday, and in the Conclusion of that Narrative, which is as follows:

'Thus my Ants were forced to make shift for a Livelihood, when I had shut up the Garret, out of which they used to fetch their Provisions. At last, being sensible that it would be a long time before they could discover the small Heap of Corn, which I had laid up for them, I resolved to shew it to them.

'In order to know how far their Industry could reach, I contrived an Expedient, which had good Success. The thing will appear incredible to those, who never considered, that all Animals of the same Kind, which form a Society, are more knowing than others. I took one of the largest Ants, and threw her upon the small Heap of Wheat. She was so glad to find her self at Liberty, that she ran away to her Nest, without carrying off a Grain; but she observed it. For an Hour after all my Ants had Notice given them of such a Provision; and I saw most of them very busie in carrying away the Corn I had laid up in the Room. I leave it to you to judge, whether it may not be said, that they have a particular Way of communicating their Knowledge to one another; for otherwise how could they know, one or two may say so, Three different Cities, governed by the same Laws, and observing the same Order, and the same Customs. However there was this Difference, that the Inhabitants of one of those Holes seem'd to be more Knowing and Industrious than their Neighbours. The Ants of that Nest were disposed in a better Order; their Corn was finer; they had a greater Plenty of Provisions; their Nest was furnished with more Inhabitants, and they were bigger and stronger. It was the Principal and the Capital Nest. Now I observed that those Ants were distinguished from the rest, and had some Preeminence over them.

'Tho' the Box-full of Earth, where the Ants had made their Settlement, was generally free from Rain, yet it rained sometimes upon it, when a certain Wind blew. It was a great inconvenience for those Insects: Ants are afraid of Water; and when they go a great way in quest of Provisions, and are surprised by the Rain, they shelter themselves under some Tile, or something else, and don't come out till the Rain is over. The Ants of the Principal Nest found out a wonderful Expedient to keep out the Rain: These was a small Piece of a flat Slate, which they laid over the Hole of their Nest, in the Day-time, when they foresaw it would Rain, and almost every Night. Above Fifty of those little Animals, especially the strongest, surrounded that Piece of Slate, and drew it equally in a wonderful Order. They removed it in the Morning; and nothing could be more Curious than to see [illegible] about such a Work. They had made the Ground uneven about their Nest, insomuch, that the Slate did not lye flat upon it, but left a free Passage underneath. The Ants of the two other Nests did not so well succeed in keeping out the Rain: They laid over their Holes several Pieces of old and dry Plaister one upon the other; but they were still troubled with the Rain, and the next Day they took a world of Pains to remove the Damage. Hence it is, that those Insects are so frequently to be found under Tiles, where they settle themselves to avoid the Rain. Their Nests are at all times covered with those Tiles, without any Incumbrance, and they lay out their Corn and their dry Earth in the Sun upon the Tiles, as one may see every Day. I took care to cover the two Ants-Nests that were troubled with the Rain: As for the Capital Nest, there was no need of [illegible]

ther Pincers, lays it by the Hole, and then goes and fetches another. Thus, in less than a Quarter of an Hour, one may see a vast Number of such small Particles of dry Earth heap'd up round the Hole. They lay their Corn under Ground upon that Earth, and cover it with the same. They perform'd this Work almost every Day, during the Heat of the Sun; and tho' the Sun went from the Window about Three or Four a Clock in the Afternoon, they did not remove their Corn and their Particles of Earth, because the Ground was very hot, till the Heat was over.

'If any one should think that those Animals should use Sand, or small Particles of Brick or Stone, rather than take so much Pains about dry Earth; I answer, that upon such an Occasion nothing can be more proper than Earth heated in the Sun. Corn does not keep upon Sand: Besides, a Grain of Corn that is cut, being deprived of its Bud, would be fill'd with small sandy Particles, that could not easily come out. To which I add, that Sand consists of such small Particles, that an Ant could not take them up one after another; and therefore those Insects are seldom to be seen near Rivers, or in a very sandy Ground.

'As for the small Particles of Brick or Stone, the least Moistness would join them together, and turn them into a kind of Mastick, which those Insects could not divide. Those Particles sticking together, could not come out of an Ants-Nest, and would spoil its Symmetry.

'When Ants have brought out those Particles of Earth, they bring out their Corn after the same manner, and place it round that Earth: Thus one may see two Heaps surrounding their Hole, one of dry Earth, and the other of Corn; and then they fetch out a Remainder of dry Earth, on which doubtless their Corn was laid up.

'Those Insects never go about this Work but when the Weather is clear, and the Sun very hot. I observ'd, that those little Animals having one Day brought out their Corn at Eleven a Clock in the Forenoon, removed it, against their usual Custom, before One in the Afternoon: The Sun being very hot, and the Sky very clear, I could perceive no Reason for it. But half an Hour after the Sky began to be overcast, and there fell a small Rain which the Ants foresaw; whereas the *Milan* Almanack had foretold that there would be no Rain upon that Day.

'I have said before, that those Ants which I did so particularly consider, fetch'd their Corn out of a Garret. I went very frequently into that Garret: There was some old Corn in it; and because every Grain was not alike, I observed that they chose the best.

'I know, by several Experiments, that those little Animals take great Care to provide themselves with Wheat when they can find it, and always pick out the best; but they can make shift without it. When they can get no Wheat they take Rye, Oats, Millet, and even Crums of Bread, but seldom any Barley, unless it [illegible]

'were some time in great Trouble, and took a great deal of Pains: They went up and down a great way looking out for some Grains of Corn: They were sometimes disappointed, and sometimes they did not like their Corn after many long and painful Excursions. What appeared to me wonderful, was, That none of them came Home without bringing something: one brought a Grain of Wheat, another a Grain of Rye or Oats, or a Particle of dry Earth, if she could get nothing else.

'The Window, upon which those Ants had made their Settlement, looked into a Garden, and was two Stories high. Some went to the further end of the Garden, others to the Fifth Story, in quest of some Corn. It was a very hard Journey for them, especially when they came Home loaded with a pretty large Grain of Corn, which must needs be a heavy Burthen for an Ant, and as much as she can bear. The bringing of that Grain from the middle of the Garden to the Nest, took up four Hours; whereby one may judge of the Strength and prodigious Labour of those little Animals. It appears from thence, that an Ant works as hard as a Man, who should carry a very heavy Load on his Shoulders almost every Day for the space of four Leagues. 'Tis true, those Insects don't take so much Pains upon a flat Ground; but then how great is the Hardship of a poor Ant, when she carries a Grain of Corn to the second Story, climbing up a Wall with her Head downwards, and her Backside upwards? None can have a true Notion of it, unless they see those little Animals at work in such a Situation. The frequent Stops they make in the most convenient Places, are a plain Indication of their Weariness. Some of them were strangely perplexed, and could not get to their Journey's end. In such a Case, the strongest Ants, or those that are not so weary, having carried their Corn to their Nest, came down again to help them. Some are so unfortunate as to fall down with their Load, when they are almost come Home: When this happens they seldom lose their Corn, but carry it up again.

'I saw one of the smallest carrying a large Grain of Wheat with incredible Pains: When she came to the Box, where the Nest was, she made so much haste that she fell down with her Load, after a very laborious March: Such an unlucky Accident would have vexed a Philosopher. I went down, and found her with the same Corn in her Paws: She was ready to climb up again. The same Misfortune happen'd to her Three Times: Sometimes she fell in the Middle of her Way, and sometimes higher; but she never let go her hold, and was not discouraged. At last, her Strength failed her: She stopt; and another Ant help'd her to carry her Load, which was one of the largest and finest Grains of Wheat that an Ant can carry. It happens sometimes, that a Corn slips out of their Paws, [illegible]

NUM. CLVII.

The GUARDIAN.

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Solomon.

Thursday, September 18. 1713.

IT has been observed by Writers of Morality, that amongst other Methods to quicken Human Industry, Providence has so contrived it, that our daily Food is not to be procured without much Pains and Labour. The chase of Birds and Beasts, the several Arts of Fishing, with all the different kinds of Agriculture, are laborious Scenes of Business, and give Employment to the greatest part of Mankind. If we look into the Brute Creation, we find all its Individuals engaged in a painful and laborious way of Life, to procure a necessary Sustenance for themselves, or those that grow up under them. The Preservation of their Being is the whole Business of it. An Idle Man is therefore a kind of Monster in the Creation. All Nature is busie about him; every Animal he sees reproaches him. Let such a Man, who lies as a Burthen or dead Weight upon the Species, and contributes nothing either to the Riches of the Commonwealth, or to the Maintenance of himself and Family, consider that Instinct with which Providence has endowed the Ant, and by which is exhibited an Example of Industry to rational Creatures. This is set forth under many surprising Instances in the Paper of Yesterday, and in the Conclusion of that Narrative, which is as follows:

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'In order to know how far their Industry could reach, I contrived an Expedient, which had good Success. The thing will appear incredible to those, who never considered, that all Animals of the same Kind, which form a Society, are more knowing than others. I took one of the largest Ants, and threw her upon the small Heap of Wheat. She was so glad to find herself at Liberty, that she ran away to her Nest, without carrying off a Grain; but she observed it. For an Hour after all my Ants had Notice given them of such a Provision; and I saw most of them very busie in carrying away the Corn I had laid up in the Room. I leave it to you to judge, whether it may not be said, that they have a particular Way of communicating their Knowledge to one another; for otherwise how could they know, one or two Hours after, that there was Corn in that place? It was quickly exhausted: and I put in more, but in a small Quantity, to know the true Extent of their Appetite or prodigious Avarice; for I make no doubt but they lay up Provisions against the Winter: We read it in Holy Scripture; a Thousand Experiments teach us the same; and I don't believe that any Experiment has been made that shews the contrary.

'I have said before, that there were Three Ants Nests in that Box of *Parterre*, which formed, if I may say so, Three different Cities, governed by the same Laws, and observing the same Order, and the same Customs. However there was this Difference, that the Inhabitants of one of those Holes seem'd to be more Knowing and Industrious than their Neighbours. The Ants of that Nest were disposed in a better Order; their Corn was finer; they had a greater Plenty of Provisions; their Nest was furnished with more Inhabitants, and they were bigger and stronger: It was the Principal and the Capital Nest. Nay, I observed that those Ants were distinguished from the rest, and had some Pre-eminence over them.

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'*M. de la Loubere* says, in his Relation of Siam, that in a certain Part of that Kingdom, which lies open to great Inundations, all the Ants make their Settlements upon Trees. No Ants-Nest are to be seen any where else. I need not insert here what that Author says about those Insects: You may see his Relation.

'Here follows a Curious Experiment, which I made upon the three Gardick, whilst I left three Ants Nests. I undertook to make a Fourth, and went